

Serial No.: 10/736,004

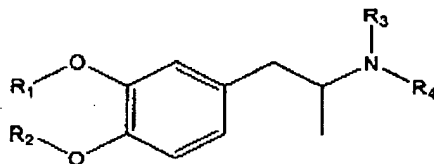
Attorney Docket No. 7459

Claims

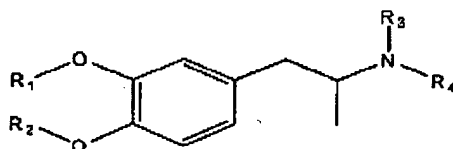
Claims 1-12 (canceled).

13. (previously presented) A method for determining a compound selected from the group consisting of 3,4-methylenedioxyamphetamine (MDA), 3,4-methylenedioxy-methamphetamine (MDMA), 3,4-methylenedioxyethylamphetamine (MDEA) and 4-hydroxy-3-methoxy-methamphetamine (HMMA), said method comprising:

- (a) providing in combination in a medium:
- (i) a sample suspected of containing said compound and
  - (ii) an antibody raised against a compound of the formula:



- wherein:
- $R^1$  is H or lower alkyl,
  - $R^2$  is  $-(CH_2)_nC(O)R^6$ ,
  - $R^3$  and  $R^4$  are independently H or lower alkyl,
  - $R^6$  is an immunogenic carrier, and
  - $n$  is an integer from 1 to 5, and
  - (iii) a label conjugate of the formula:



- wherein:
- $R^1$  is H, lower alkyl  $-(CH_2)_nC(O)R^6$ ,
  - $R^2$  is H, lower alkyl or  $-(CH_2)_nC(O)R^6$ ,
  - wherein at least one of  $R^1$  and  $R^2$  is not H or lower alkyl,
  - $R^6$  is a label, and
  - $n$  is an integer from 1 to 5, and

Serial No.: 10/736,004

Attorney Docket No. 7459

(b) measuring signal from said label, the amount thereof being related to the presence of said compound in said sample.

14. (canceled)

15. (previously presented) A method according to Claim 13 wherein said method is a homogeneous method and said medium is examined for the amount of said signal.

16. (previously presented) A method according to Claim 13 wherein said method is a heterogeneous method and said complex, if present, is separated from said medium.

17. (previously presented) A method according to Claim 13 wherein said protein is selected from the group consisting of KLH, BSA, BGG and ovalbumin.

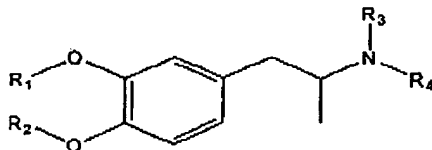
18. (previously presented) A method according to Claim 13 wherein n is 1.

19. (previously presented) A method according to Claim 15 wherein said label is an enzyme label, a luminescent label, or a radioisotope label.

20. (canceled)

21. (previously presented) A kit for determining a compound selected from the group consisting of 3,4-methylenedioxyamphetamine (MDA), 3,4-methylenedioxy-methamphetamine (MDMA), 3,4-methylenedioxyethylamphetamine (MDEA) and 4-hydroxy-3-methoxymethamphetamine (HMMA), said kit comprising:

- (a) an antibody for said compound,
- (b) a label conjugate of the formula:



wherein: R<sup>1</sup> is H or lower alkyl,

Serial No.: 10/736,004

Attorney Docket No. 7459

$R^2$  is  $-(CH_2)_nC(O)R^6$ ,

$R^3$  and  $R^4$  are independently H or lower alkyl,

$R^6$  is a label, and

$n$  is an integer from 1 to 5,

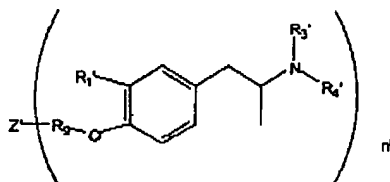
(c) ancillary reagents for determining said compound.

Claims 22-23. (canceled).

24. (previously presented) A kit according to Claim 21 wherein said label is an enzyme label, a luminescent label, or a radioisotope label.

25. (previously presented) A method for determining methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in a sample suspected of containing methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine, said method comprising:

- (a) providing in combination in a medium:
  - (i) said sample,
  - (ii) an antibody for methylenedioxyamphetamine, and/or
  - (iii) an antibody for methylenedioxymethamphetamine, and/or
  - (iv) an antibody for methylenedioxyethamphetamine, and
  - (v) a compound of the formula:



wherein:

$R^1$  is H, or methyl or ethyl

$R^3$  is H,

$R^4$  is H, or methyl or ethyl,

$R^9$  is  $-(CH_2)_nC(O)$ ,

$Z'$  is an enzyme,

Serial No.: 10/736,004

Attorney Docket No. 7459

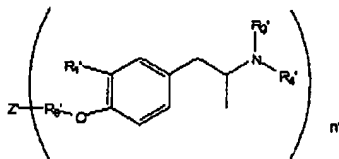
n is an integer from 1 to 5,  
 n' is an integer between 1 and the molecular weight of said enzyme divided by about 500;  
 and

(b) examining said medium for the presence of a complex comprising said methylenedioxyamphetamine and said antibody for methylenedioxyamphetamine and/or a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine and/or a complex of said methylenedioxyethamphetamine and said antibody for methylenedioxyethamphetamine, the presence thereof indicating the presence of said methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

Claim 26. (canceled).

27. (previously presented) A method for determining methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in a sample suspected of containing methylenedioxyamphetamine and/or methylenedioxymethamphetamine and/or methylenedioxyethamphetamine, said method comprising:

- (a) providing in combination in a medium:
  - (i) said sample,
  - (ii) a conjugate of an enzyme and a methylenedioxyamphetamine analog and a conjugate of an enzyme and a methylenedioxymethamphetamine analog and a conjugate of an enzyme and a methylenedioxyethamphetamine analog,
  - (iii) an antibody for methylenedioxyamphetamine, said antibody being raised against a compound of the formula:



wherein:

R<sup>1</sup> is H, or methyl or ethyl

R<sup>3</sup> is H,

R<sup>4</sup> is H,

Serial No.: 10/736,004

Attorney Docket No. 7459

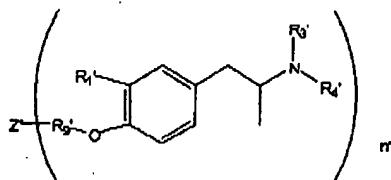
$R^{9'}$  is  $-(CH_2)_nC(O)$ ,

$Z'$  is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

$n$  is an integer from 1 to 5,

$n'$  is an integer between 1 and the molecular weight of said protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500; and

(iv) an antibody for methylenedioxymethamphetamine, said antibody being raised against a compound of the formula:



wherein:

$R^{1'}$  is H, or methyl or ethyl

$R^{3'}$  is H,

$R^{4'}$  is methyl,

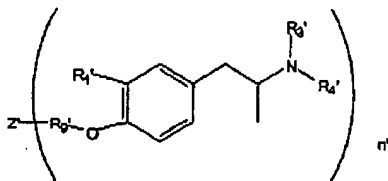
$R^{9'}$  is  $-(CH_2)_nC(O)$ ,

$Z'$  is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

$n$  is an integer from 1 to 5,

$n'$  is an integer between 1 and the molecular weight of said protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500; and

(v) an antibody for methylenedioxyethamphetamine, said antibody being raised against a compound of the formula:



wherein:

$R^{1'}$  is H, or methyl or ethyl

$R^{3'}$  is H,

$R^{4'}$  is ethyl,

$R^{9'}$  is  $-(CH_2)_nC(O)$ ,

Serial No.: 10/736,004

Attorney Docket No. 7459

Z' is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

n is an integer from 1 to 5,

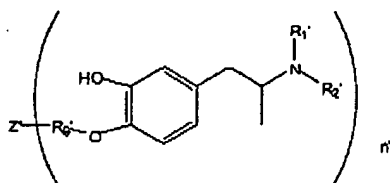
n' is an integer between 1 and the molecular weight of said protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500; and

(b) examining said medium for the presence of a complex comprising said methylenedioxyamphetamine and said antibody for methylenedioxyamphetamine and a complex of said methylenedioxymethamphetamine and said antibody for methylenedioxymethamphetamine and a complex of said methylenedioxyethamphetamine and said antibody for methylenedioxyethamphetamine, the presence thereof indicating the presence of said methylenedioxyamphetamine and methylenedioxymethamphetamine and/or methylenedioxyethamphetamine in said sample.

Claims 28-29 (canceled).

30. (previously presented) A kit comprising in packaged combination:

- (i) an antibody for methylenedioxyamphetamine,
- (ii) an antibody for methylenedioxymethamphetamine, and/or
- (iii) an antibody for methylenedioxyethamphetamine, and
- (iv) a compound of the formula:



wherein:

R<sup>1</sup> is H,

R<sup>2</sup> is H, or methyl or ethyl,

R<sup>9</sup> is -(CH<sub>2</sub>)<sub>n</sub>C(O),

Z' is an enzyme,

n is an integer from 1 to 5,

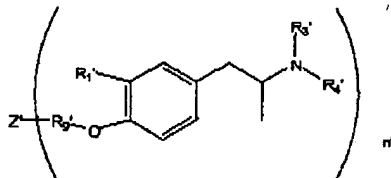
n' is an integer between 1 and the molecular weight of said enzyme divided by about 500.

Serial No.: 10/736,004

Attorney Docket No. 7459

31. (previously presented) A kit comprising in packaged combination:

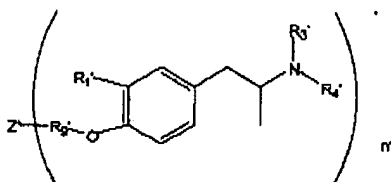
- (i) a conjugate of an enzyme and a methylenedioxyamphetamine analog and/or a conjugate of an enzyme and a methylenedioxymethamphetamine analog, and/or a conjugate of an enzyme and a methylenedioxyethamphetamine analog, and
- (ii) an antibody for methylenedioxyamphetamine, said antibody being raised against a compound of the formula:



wherein:

 $\text{R}_1'$  is H, or methyl or ethyl $\text{R}_3'$  is H, $\text{R}_4'$  is H, $\text{R}_9'$  is  $-(\text{CH}_2)_n\text{C}(\text{O})$ , $\text{Z}'$  is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier, $n$  is an integer from 1 to 5, $n'$  is an integer between 1 and the molecular weight of said protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500; and

- (iii) an antibody for methylenedioxymethamphetamine, said antibody being raised against a compound of the formula:



wherein:

 $\text{R}_1'$  is H, or methyl or ethyl $\text{R}_3'$  is H, $\text{R}_4'$  is methyl, $\text{R}_9'$  is  $-(\text{CH}_2)_n\text{C}(\text{O})$ , $\text{Z}'$  is a protein immunogenic carrier or a non-poly(amino acid) immunogenic carrier,

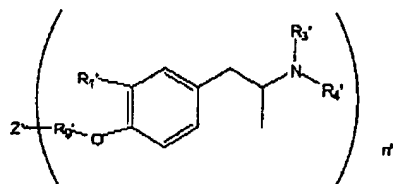
Serial No.: 10/736,004

Attorney Docket No. 7459

$n$  is an integer from 1 to 5,

$n'$  is an integer between 1 and the molecular weight of said protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500, and

(iv) an antibody for methylenedioxyethamphetamine, said antibody being raised against a compound of the formula:



wherein:

$R^{1'}$  is H, or methyl or ethyl

$R^{3'}$  is H,

$R^{4'}$  is ethyl,

$R^{2'}$  is  $-(CH_2)_nC(O)$ ,

$Z'$  is a protein immunogenic carrier in or a non-poly(amino acid) immunogenic carrier,

$n$  is an integer from 1 to 5,

$n'$  is an integer between 1 and the molecular weight of said protein immunogenic carrier or said non-poly(amino acid) immunogenic carrier divided by about 500.

Claim 32 (canceled).